

***Begonia kachinensis* (Begoniaceae, sect. *Sphenanthera*), a New Species from Myanmar**

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Begonia kachinensis Nb. Tanaka (Begoniaceae, section *Sphenanthera*), from the Hukaung Valley Tiger Reserve, Kachin State, northern Myanmar, is illustrated and described as a new to science. *Begonia kachinensis* is easily distinguished from other species of *Begonia* section *Sphenanthera* by a combination of the following characters; dioecious habit, bicolored leaves, flowers with two tepals, and 4-locular baccate fruits.

Key words: *Begonia*, *Begonia* sect. *Sphenanthera*, Begoniaceae, Myanmar, new species

Field expeditions in cooperation with the Forest Department, Union of Myanmar Ministry of Forestry, in 2005 and 2007 to the Hukaung Valley Tiger Reserve, Kachin State, northern Myanmar, one of the largest national parks in Myanmar and floristically poorly known, resulted in the discovery of a hitherto undescribed species of *Begonia* (Begoniaceae), which is here named *Begonia kachinensis* Nb. Tanaka. The 4-locular baccate fruits and anthers with extended connectives place *B. kachinensis* in section *Sphenanthera*, an exclusively Asian section recognized primarily on the basis of its baccate fruits (Tebbutt 2003). Furthermore, based on observations in the field over two years, *B. kachinensis* appears to be dioecious. Both the staminate and pistillate flowers have only two tepals. *Begonia hayamiana* Nb. Tanaka, also in section *Sphenanthera*, was also recently described from the Hukaung Valley Tiger Reserve (Tanaka & Hughes 2007).

Begonia, a genus of about 1500 species of herbs, shrubs, and climbers, mainly in the tropics and subtropics of South America, Africa and Asia (Nguyen 2004), is divided into 63 sections

(Doorenbos *et al.* 1998). Other species with 4-locular ovaries in section *Sphenanthera* are *B. aborensis* Dunn, *B. acetosella* Craib, *B. burkillii* Dunn, *B. handelii* Irmscher, *B. hayamiana* Nb. Tanaka, *B. roxburghii* A. DC., *B. silletensis* (A. DC.) C.B. Clarke and *B. tessaricarpa* C.B. Clarke. *Begonia kachinensis* is easily distinguished from all of them by the combination of the dioecious habit, bicolored leaves, flowers with two perianth segments, and 4-locular baccate fruits.

***Begonia kachinensis* Nb. Tanaka, *sp. nov.*—
Figs. 1 & 2**

Ex sectione *Sphenanthera*; ab omnibus speciebus ovarium tetralocularem habentibus foliorum laminis bicoloribus, floribus masculis et femineis tepalis 2 conspicue dif-
fert.

Typus. MYANMAR. Kachin State, east of Shingbwiyang Town, 26°41'51"N, 96°12'27"E, 12 February 2007, J. Murata, N. Tanaka, T. Kawahara, M. Tamura, S. Kaki-shima & N. Takamura 041412 (holo- MBK; iso- E, TI).

Plant dioecious, terrestrial, acaulescent, perennial, 15–20 cm tall. *Rhizomes* absent. *Stems* fleshy, herbaceous, green or brownish or dark

reddish, unbranched, usually creeping near base, nodes swollen, internodes 2–6 cm long, hairy. *Stipules* persistent, green, ovate to lanceolate, 0.7–1.5 cm long, 0.3 cm wide, apex acute, margin entire, abaxially with long fleshy hairs, somewhat transparent, midrib prominent abaxially, glabrous adaxially. *Leaves* alternate; petioles bright

green, 2.5–15 cm long, hairy; blade cordate, base strongly asymmetric cordate, margin slightly toothed, ciliate, apex acute, abaxially green, reddish purple along margin and midrib, adaxially green, dark along margin and midrib, with dense soft hairs on both surfaces, venation palmate-pinnate, veins prominent adaxially. *Inflorescences*

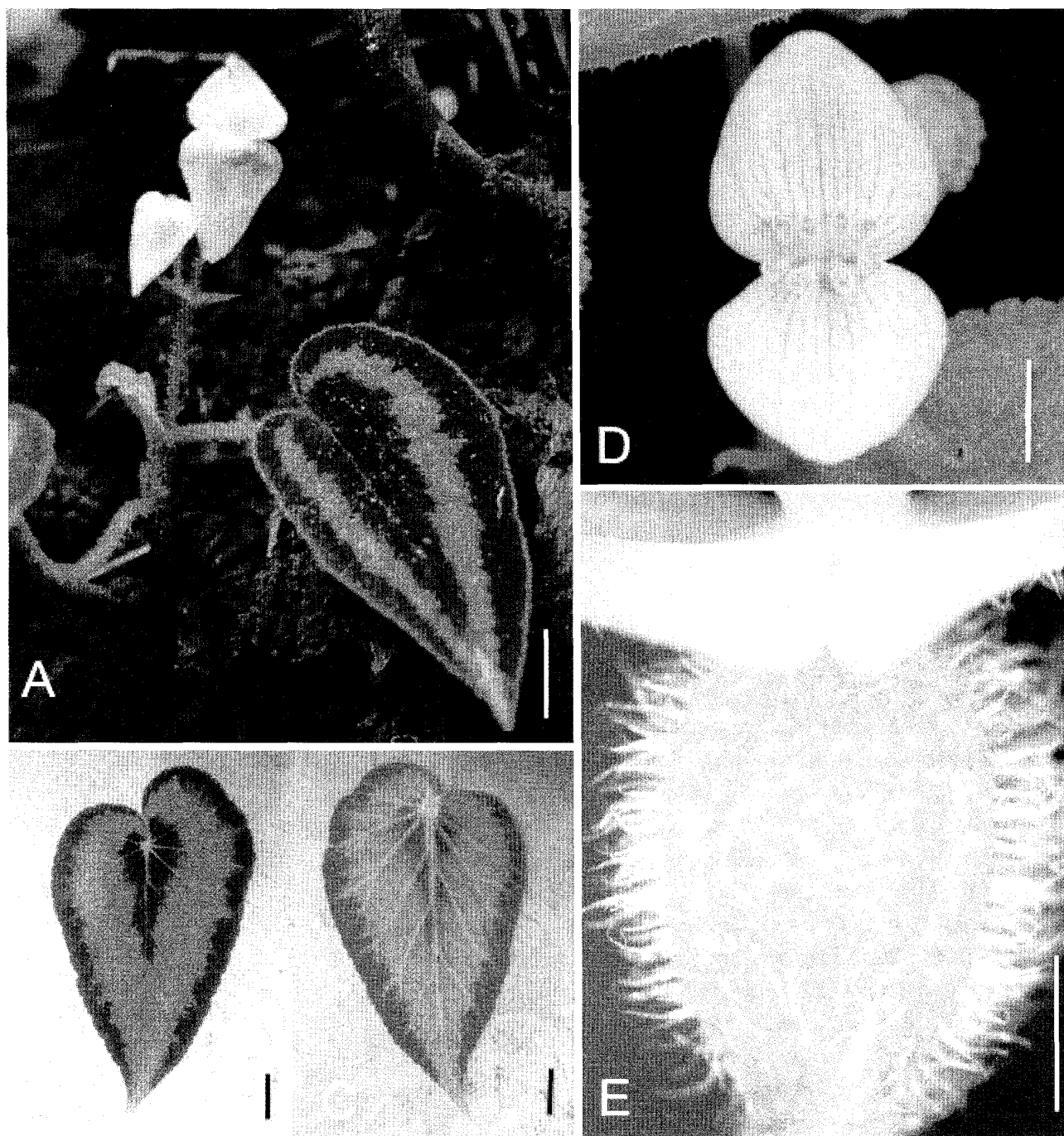


FIG. 1. *Begonia kachinensis* Nb. Tanaka A: Staminate plant growing in deep shade in tropical forest, east of Shinbuiyang, Kachin State, northern Myanmar. B: Upper surface of leaf blade. C: Lower surface of leaf blade. D: Closeup of pistillate flower. E: Ovary. Scale bar represents 3 cm (A – C), 1 cm (D), 5 mm (E).

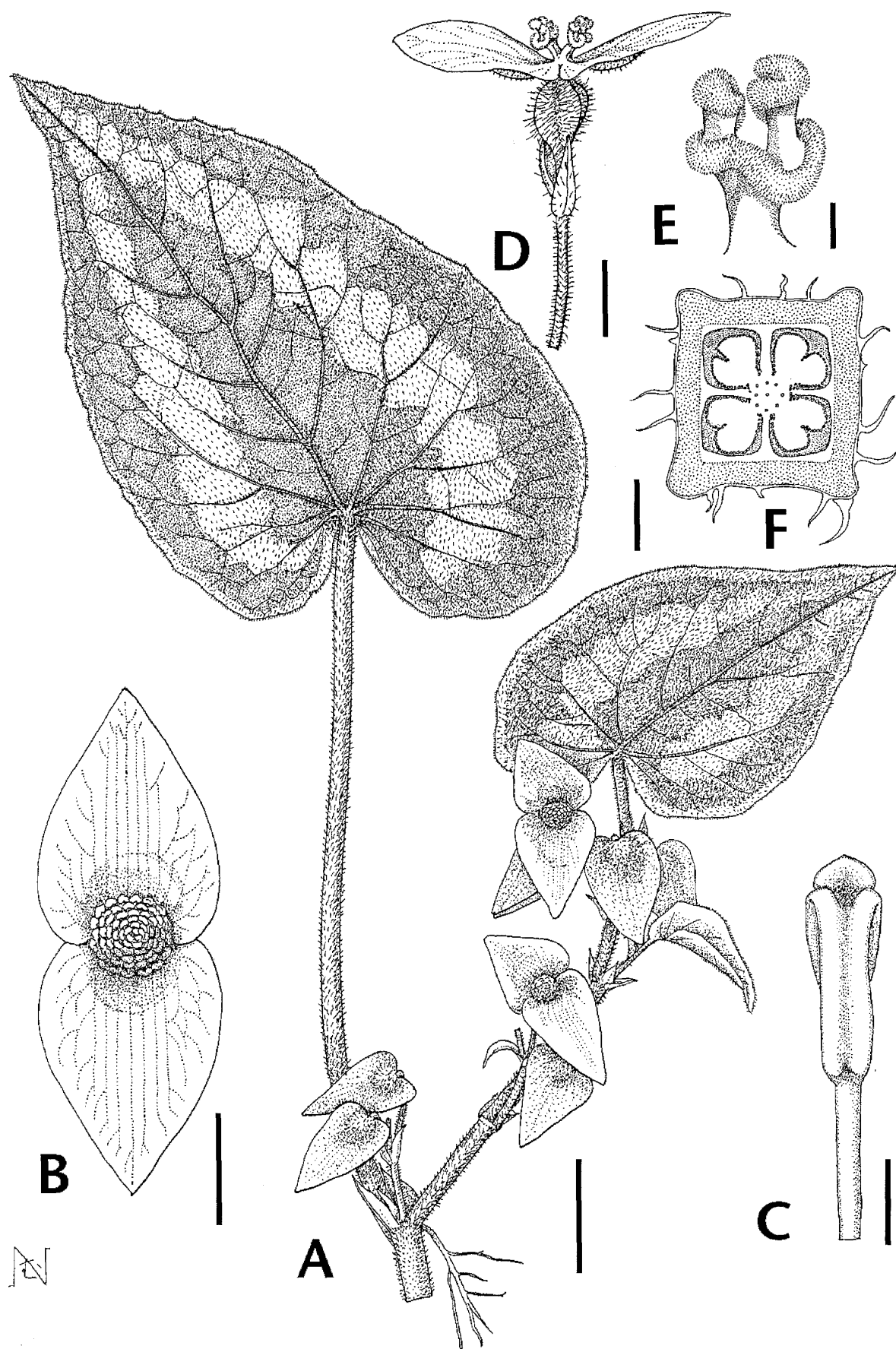


FIG. 2. *Begonia kachinensis* Nb. Tanaka. A: Habit. B: Closeup of staminate flower. C: Stamen. D: Closeup of pistillate flower. E: Stigma. F: Ovary in transverse section. Scale bar represents 3 cm (A), 1 cm (B, D), 3 mm (F), 1 mm (C, E).

axillary, cymose, 1–3-flowered; *peduncle* green, 2–2.5 cm long, hairy; bracts oblong-lanceolate, margin entire, apex aristate, hairy, 1.5 cm long, 0.5–0.6 cm wide, persistent. *Staminate flowers* 2 or 3, perianth segments 2, free, white, ovate to deltoid, 2–2.5 cm long, 1–2 cm wide, outer surface hairy, inner surface glabrous, margin entire; bracteoles absent; pedicel ca. 1 cm long, hairy; *stamens* ca. 90, yellow; filaments free for 3/4 their length, 1.5–2 mm long, fused at base into a short column; anthers 1–2 mm long, ellipsoid to ellipsoid-obovoid, connective extended into round apex. *Pistillate flower* solitary, perianth segments 2, free, white, slightly flushed pink at base, ovate to deltoid, 2.2 cm long, 2 cm wide; bracteole absent; pedicel 1 cm long, hairy; *ovary* green, with long hairs, 4-locular, 4-winged, tetragonal, 1.5 cm long, 0.8–1 cm wide; *placentae* axile, bifid; styles 4, shortly fused at base, 5–5.5 mm long, green, bifid; stigma kidney shaped, green. *Fruits* indehiscent, 1.5 cm long, 1 cm wide, fleshy, somewhat pendulous, glossy green, hairy, suborbicular to rhomboid, somewhat pendulous, without wings (wings absent in mature fruit).

Distribution: Northern Myanmar. Known only from Kachin State.

Habitat & Ecology: Terrestrial, in deep shady moist conditions in tropical evergreen forest, ca. 250 m alt.

IUCN Category: LC (Least Concern). Although this species is known only from the type locality, the Hukaung Valley Tiger Reserve contains considerable extant rainforest between 200 and 800 m elevation.

Etymology: The specific epithet denotes the

name of the state, Kachin, in northern Myanmar, where the type locality is located.

Other specimen examined: Kachin State, west of Shingbuiyang Town, 26°41'44–57"N, 96°11'13–23"E, alt. 200–250 m, shaded forest floor, 3 December 2005, J. Murata, S. Kobayashi, Y. Hayami & M. Takashima 041172 (MBK, TI).

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